

REMARKS

This Request for Reconsideration is in response to the Office Action of June 15, 2005 in which claims 1-19 were rejected.

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Regarding the Examiner's response to applicant's arguments appearing at page 9 in numbered paragraph 11 of the last Office Action, applicant has reviewed the *In Re Oetiker* case cited by the Examiner and concurs that the opinion holds that in order to rely on a reference as a basis for rejection the reference must either be in the field of the applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. Applicant also agrees that Stoeckl and the automotive seating references are outside the inventor's field of endeavor. However, applicant disagrees with the Examiner's conclusion that Stoeckl or the automotive references are reasonably pertinent to the particular problem with which the applicant was concerned. Please refer to the *In Re Oetiker* decision itself in the next paragraph appearing in the decision from which the Examiner's citation was taken. In that next paragraph, it is stated that "there must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination." The Examiner's reason does not come from the prior art i.e. "that it would have been obvious ... to provide headrest with sensor in Reichlen apparatus in view of teaching of Stoeckl to coordinate views with different directions." For example, the varying of the "point-in-view" of Stoeckl refers to the "mouth point" upon which the dentist operates and does not have anything to do with the claimed differing "directions-of-view" from which the claimed sequence of images are viewed by the user whose head is supported by the moveable headrest. This information comes from the applicant's disclosure, not from Stoeckl and is therefore improper hindsight. See the condemnation of hindsight reconstruction from *In Re Oetiker* in the paragraph following the paragraph cited by the Examiner where

the cases of *Diversitech Corp. v. Century Steps, Inc.*, and *Interconnect Planning Corp. v. Feil* are cited. In other words, for the Examiner's rejection to stand, there would have to be some hint or suggestion in the Stoeckl reference and/or the Reichlen reference that would hint at or suggest the combination proposed by the Examiner. The reasons given by the Examiner simply do not come from the prior art.

In the first full paragraph on page 10 of the Office Action, the Examiner recognizes this point and cites the cases of *In Re Fine* and *In Re Jones* but still does not show any teachings, suggestions or motivations to make the combination from the references themselves or in the knowledge generally available to one of ordinary skill in the art even though the citation has been made to the above cited case law. In the *In Re Fine* case, cited by the Examiner, the CAFC agreed with the applicant that the Patent Office had not met its burden of establishing a *prima facie* case of obviousness because it had not shown any objective teaching in the prior art or in the knowledge generally available to one of ordinary skill in the art that would lead that individual to combine the relevant teachings of the references. In the *In Re Fine* case, the basis for overturning of the rejection (that it would have been obvious to substitute a nitric acid detector for a sulfur dioxide detector) was that the USPTO had merely made a "bold assertion" that a substitution of one type of detector for another would have been within the skill of the art without any support for this conclusion. Neither the Examiner nor the Board of Appeals had pointed to anything in the cited references, either alone or in combination, suggesting or teaching Fine's invention. The same may be said about the present rejection where the Examiner has not pointed to anything in either the Reichlen disclosure or the Stoeckl disclosure that suggests or teaches the applicant's headrest invention.

Similarly, in the *In Re Oetiker* case cited by the Examiner, the CAFC pointed out that the USPTO's opinion that the garment industry art was "analogous art" (because it related to a hooking problem as did the Oetiker invention) was unsupportable because the USPTO Board's apparent reasoning was merely that "all

hooking problems are analogous.” The secondary reference used by the USPTO described a plastic hook-and-eye fastener for use in garments and applied same in an obviousness rejection of Oetiker’s invention in the art of open clamp structures adapted to be mechanically interconnected. The clamp structure resembled a metal band which forms a ring around an object to be fastened such as a hose (see Fig. 4 of U.S. 5,274,886 of Oetiker), i.e., a metal band hose clamp. The Lauro reference applied by the USPTO was a plastic hook and eye fastener having a wafer thin tab of sewing machine puncturable plastic material plastic molded to a plastic hook or eye catch member which tabs are affixable to clothing and the like by sewing with minimal danger of breaking a sewing needle. The use is for wearing apparel such as dresses, corsets, brassieres, pants and swimsuits. Oetiker argued that there was no suggestion or motivation to the artisan to combine the teachings of the cited references, and that Lauro was nonanalogous art. Applicant Oetiker argued that the references were improperly combined and that a person of ordinary skill, seeking to solve the problem facing Oetiker, would not look to the garment art for the solution. Oetiker further argued that even if combined the references did not render the claimed combination obvious. The CAFC agreed with the appellant and reversed the USPTO rejection because the reference must either be in the field of the appellant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. In the Oetiker case there was no commonality in the field of endeavor and there was no reasonable pertinence. Furthermore, there was no reason, suggestion or motivation found *in the prior art* whereby a person of ordinary skill in the field of the invention would make the combination, the CAFC pointing out that knowledge cannot come from the applicant’s invention itself.

In the present case, the reasons advanced by the Examiner do not rise to the level that could be considered convincing evidence *from the prior art* that the inventor would reasonably be motivated to go to the field in which the Examiner found the reference in order to solve the problem confronting the inventor. The Court has stated

that when the PTO is evaluating such an invention, it is necessary to consider “the reality of the circumstances,” *In Re Wood*, 599 F.2d 1032, 1036, 202 USPQ 171, 174 (CCPA 1979) – in other words, common sense – in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor. In this case also, it is not convincing to believe that one of ordinary skill in the art would go to the art of dental patient chairs or the automotive seating arts to solve the problem.

In the case of *In Re Jones*, 21 USPQ 2d 1941 also cited by the Examiner, it was also a case where the USPTO’s obviousness rejection was reversed because the art applied was nonanalogous. Conspicuously missing from the record in the *In Re Jones* case was any *evidence* other than the USPTO’s *speculation* that one of ordinary skill in the herbicidal art would have been motivated to make the modifications of the prior art salts necessary to arrive at the claimed ethanol salt. The CAFC pointed out that in order to support a nonobviousness rejection there must be adequate support in the prior art to complete the PTO’s *prima facie* case and shift the burden of going forward to the applicant.

Likewise, it is applicant’s position that neither the automotive seating art nor the dental patient chair art are reasonably pertinent to the particular problem with which the applicant was concerned. See page 2, lines 11-19 of the present specification where it is pointed out that known systems require the user to address the imaging system with an erect standing or seated posture that can be physically wearing over extended periods and that, in the context of active applications, they require the user to exert a degree of activism that can be overly demanding and even disconcerting.

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Regarding the rejection of claims 1-2, 6 and 10 under 35. U.S.C. §103(a) as being unpatentably obvious over Breed et al (U.S. 6,242,701) in view of Iwamoto (U.S. 5,751, 259), the art of imaging systems in which a changing direction-of-view of

the images is coupled to a changing direction-of-view of the head of the viewer is not analogous to the art of controlling or adjusting a headrest in a motor vehicle for an optimum location for rear impact protection (see column 22, lines 40-46 of Breed et al). In any application of an obviousness rejection, several basic factual inquiries should be made: (I) the scope and content of the prior art, (II) differences between the prior art and the claims at issue and (III) the level of ordinary skill in the pertinent art.

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I. Regarding the scope and content of the prior art, the question of patentability turns on whether the subject matter as a whole sought to be patented was obvious to one with “ordinary” skill in the *art* to which the subject matter pertains in light of the “prior art.” These are two distinct questions: (1) what is the “art” to which the subject matter “pertains”? and (2) what is the “prior art”?

The subject matter of the present invention pertains to the “art” of imaging systems and, more particularly, to imaging systems in which a changing direction-of-view of the images is coupled to a changing direction-of-view of the head of the viewer. In known active and passive systems in this art the user is required to address the imaging system with an erect standing or seated posture that can be physically wearying over extended periods. Moreover, in the context of active applications, such as entertainment, such systems require the user to exert a degree of activism that can be overly demanding and even disconcerting. But these problems are overcome by the present invention by giving the user a relaxed entertainment experience preferred by most users. See page 2, lines 14-27.

Thus, the “prior art” encompasses at least the “art” of virtual reality and imaging systems in which a changing direction-of-view of the images is coupled to a changing direction-of-view of the head of the viewer.

The Examiner has applied as a primary reference the Breed et al patent which describes apparatus for evaluating the seated-state of a seat in a motor vehicle. In the reference, the Examiner points to Figure 8 items 100, 110 described at column 21, lines 51-61. There, a moveable headrest 111 is shown in a seat back 3. The general idea of the Breed et al disclosure is to make it possible to control a component, system or subsystem in the vehicle based on detecting the “seated-state” of the seat, whether it be occupied by a person or an inanimate object. If it is occupied by a person, the component adjustment system automatically and passively adjusts the component based on the “morphology of the occupant of the seat.” See column 20, lines 48-51.

Referring to Figure 8, the headrest 111 is capable of being moved up and down until an ultrasonic sensor and receiver 120, 121 finds the top of the head of the seated passenger and then the vertical position closest to the head of the occupant is found and the moveable headrest remains at that position (column 22, lines 29-32). This is accomplished using an algorithm and a microprocessor which is part of a control circuit 150. According to Breed et al, the headrest 111 is then moved to an optimum location for rear impact protection as described in another patent. See column 22, lines 42-46.

The primary reference in the present rejection is somewhat similar to the primary Watkins patent cited in the last action except that it has server motors 161, 170 which can move the headrest which is different from the Watkins patent which did not have this feature. However, there is still no reason shown from either the Breed et al reference or the Iwamoto reference that would incline one of ordinary skill in the art to modify Breed et al’s system in view of the teaching of Iwamoto to allow to view images in any desired location. The citation to column 5, lines 18-20 of Iwamoto merely states that since display devices are moved in response to head movement, the user is able to view the image in any desired direction. This does not suggest to one of

skill in the art use a moveable headrest with which to view images. There is nothing in Iwamoto or Breed et al that suggests such a thing.

References within the statutory terms of 35 U.S.C. §102 qualify as prior art for an obviousness determination only when analogous to the claimed invention. *In re Clay*, 966 F.2d 656, 658 (Fed. Cir. 1992). Two separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor's endeavor, whether the reference is still reasonably pertinent to the particular problem with which the inventor is involved. *In re Deminski*, 796 F.2d 436, 442 (Fed. Cir. 1986); *See also In re Wood*, 599 F.2d 1032, 1036, (CCPA 1979). The "field of endeavor" test is made by reference to explanations of the invention's subject matter in the patent application, including the embodiments, function, and structure of the claimed invention. *See Wood*, 599 F.2d at 1036 (confining the field of endeavor to the scope explicitly specified in the background of the invention); *See also Deminski*, 796 F.2d at 442 (determining that the cited references were within the same field of endeavor where they "have essentially the same function and structure"). Obviously, the Breed et al reference dealing with the optimum location of a motor vehicle headrest for rear impact protection is not from the same field of endeavor as virtual reality or imaging systems in which a changing direction-of-view of the images is coupled to a changing direction-of-view of the head of the viewer. Since the reference is not within the field of the inventor's endeavor, the second test i.e. whether the reference is still reasonably pertinent to the particular problem with which the inventor was involved is next addressed. As mentioned above, the present invention is trying to solve the problems mentioned at page 2 of the present specification at lines 11-19 where the prior art requires the user to address the imaging system with an erect standing or seated posture that can be physically wearying over extended periods or, in the context of active applications, such as entertainment, they require the user to exert a degree of

activism that can be overly demanding and even disconcerting. Such requirements are the antithesis of the relaxed entertainment experience preferred by most users. Thus, as mentioned at page 2, lines 21-27, the objects of the present invention are to provide an immersive imaging system that can be enjoyed passively or semi-actively, in a relaxed way, without requiring any overly demanding or disconcerting activism and to provide an immersive imaging system without requiring a posture that wearies the user.

Clearly, using either the *Wood* or *Deminisky* tests, the field of optimally positioning of a headrest in a motor vehicle is not within the same field of endeavor as virtual reality or imaging systems in which a changing direction-of-view of the images as coupled to a changing direction-of-view of the head of the viewer.

Moreover, the Breed et al reference is not reasonably pertinent to the particular problem mentioned in the description of related art section of the present invention on pages 1 and 2 of the specification. The present inventor was not presented with a problem of providing a headrest for protection against rear impact for motor vehicles. This is not pertinent because it deals with a completely different problem and a completely different art.

An object of the present invention is to provide an immersive imaging system that can be enjoyed passively or semi-actively, in a relaxed way, without requiring any overly demanding or disconcerting activism and without requiring a posture that wearies the user. As stated by the Board of Appeals in the U.S. Patent and Trademark Office in *Ex parte Dussaud*, 7 USPQ 2d 1818 (Bd. Pat. App. & Interferences 1998), “precise definition of the problem is important in determining whether a reference is from a non-analogous art. Defining the problem too narrowly may result in excluding consideration of relevant prior art. By the same token, defining the problem to broadly...may result in considering prior art as ‘analogous’ which is inconsistent with



real world considerations.” The precise nature of the problem as defined above is quite remote from the art of automatic and optimal positioning of a headrest in a motor vehicle.

It is not believed that one of ordinary skill in the art would reasonably be motivated to go to the field of automatic positioning of headrests in vehicles in order to solve the problem of providing an immersive imaging system that can be enjoyed passively or semi-actively, in a relaxed way, without requiring any overly demanding or disconcerting activism and without requiring a posture that wearies the user. According to the CAFC in *Pendec Inc. V. Graphic Controls Corp.* 776 F.2d 309, 227 USPQ 766 (Fed. Cir. 1985), “it is necessary to consider ‘the reality of the circumstances,’...- in other words, common sense-- in deciding in which fields the person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor...the combination of elements from non-analogous sources, in a manner that reconstructs the applicant’s invention only with the benefit of hindsight is insufficient to present a *prima facie* case of obviousness.”

The Breed et al reference cannot be considered to be within the prior art encompassed by and related to the art of virtual reality or imaging systems in which a changing direction-of-view of the images is coupled to a changing direction-of-view of the head of the viewer. The present invention teaches a way to provide an immersive imaging system that can be enjoyed passively or semi-actively in a relaxed way, without requiring any overly demanding or disconcerting activism and without requiring a posture that wearies the user while, in contrast, the Breed reference has to do with developing an apparatus for positioning a headrest in a motor vehicle. A reference can be considered reasonably pertinent if it would logically have commended itself to the inventor’s attention in considering his problem. Thus, the purposes of both the invention and the prior art are important in determining whether the reference is

reasonably pertinent to the problem the invention intends to solve. If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, and the facts support its use, then it is pertinent but otherwise not. An inventor may well have been motivated to consider a reference when making his invention but if it is directed to a different purpose, the inventor would accordingly have had less motivation or occasion to consider it. From a common sense point of view, as recommended in the *Pentec* case cited above, a person having ordinary skill in the art of virtual reality or imaging systems in which a changing direction-of-view of the images is coupled to a changing direction-of-view of the head of a viewer would not reasonably have been expected to solve the problem of imaging systems that are physically wearying over extended periods and the problem of not making the user exert a degree of activism that can be overly demanding by consulting the Breed et al reference which deals with optimally positioning headrests in motor vehicles.

Consequently, the Watkins reference is not analogous art and the 35 U.S.C. §103 rejection is inapplicable.

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II. Regarding the differences between the prior art and the claims at issue, the Examiner admits that Breed et al do not show a head of a user in executing head movements to view images from changing directions. The Examiner cites Iwamoto (U.S. 5,751,259) for teaching a head of a user in executing head movements to view images from changing directions in seated or standing positions pointing to Figure 6, items 1 and 28-29, referring to column 4, lines 53-67.

The Iwamoto reference is within the field of endeavor of the present invention i.e. imaging systems in which a changing direction-of-view of the images is coupled to a changing direction-of-view of the head of the viewer. However, the Iwamoto reference is merely illustrative of a known active system that requires the user to

address the imaging systems with an erect standing or seated posture that can be physically wearying over extended periods (see page 2 of the present specification at lines 11-14). It is also illustrative of the second problem recognized by the present inventor, i.e. in the context of active applications, such as entertainment, that they can require the user to exert a degree of activism that can be overly demanding and even disconcerting. Such requirements are the antithesis of the relaxed entertainment experience preferred by most users. See page 2 of the present specification at lines 14-19.

Even if the Breed reference were considered to be analogous, it would still be necessary for the Breed reference combined with Iwamoto to have suggested (expressly or by implication) the possibility of achieving further improvement by combining the teachings along the line of the present invention and, furthermore, whether the claimed invention achieved more than the combination of the Breed reference and the Iwamoto reference altogether suggested, expressly or by reasonable implication *In re Sernaker*, 702 F.2d 989, 217 USPQ 1 (Fed. Cir. 1983). In this case, neither the Breed reference nor Iwamoto suggest the possibility of achieving a solution that provides an immersive imaging system that can be enjoyed passively or semi-actively, in a relaxed way, without requiring any overly demanding or disconcerting activism and without requiring a posture that wearies the user. Therefore, neither the Breed nor Iwamoto reference suggest or provide any motivation to make the modification necessary to the Watkins reference to arrive at the presently claimed invention.

The Examiner's motivation as recited at page 2 in the last paragraph i.e., in order to allow the user to be able to view the image in any desired location, points it to column 5, line 18-20 in Iwamoto, does not arrive at the present invention. There is no hint or suggestion in Iwamoto of the seated user having his head supported with a

headrest. Likewise, there is no hint or suggestion in Breed et al of the seated user having his head supported with a headrest; rather, the headrest is optimally positioned for rear impact protection.

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III. Regarding the level of ordinary skill in the art, the level of skill in the art is well reflected in the prior art reference to Iwamoto. *In re GPAC Inc.* 57 F.3d 1573, 35 USPQ 2d 1116 (Fed. Cir. 1995) (“..the level of ordinary skill was ‘best determined by appeal to the references of record’...”). The Iwamoto reference shows that the person of ordinary skill in the art at the time the invention was made was concerned with an active user who assumes an erect standing or seated posture that can be physically wearying over extended periods and that, moreover, in the context of active applications such as entertainment, such a system requires the user to exert a degree of activism that can be overly demanding and even disconcerting. Iwamoto, as a person of ordinary skill in the art, did not suggest that this might not be a good idea and that most users would rather enjoy a relaxed entertainment experience that is provided by the present invention.

Therefore, the 35 U.S.C. §103 rejection of claims 1, 2 and 6 is inapplicable and withdrawal is thereof requested.

Regarding claim 10, it is incorrect for the Examiner to state that Breed teaches a support for supporting a user in a reclining posture with a head of a user resting on a headrest mounted on or with respect to a support. It is true that the moveable headrest 111 shown in Figure 8 of Breed moves. But it only moves after sensing the position of the head of the seated passenger with the ultrasonic sensor/receiver 120, 121 under the control of the control circuit 150 so that the headrest is properly positioned for rear impact protection. It has nothing to do with supporting the head of the user in executing head movements in a changing direction of the head of the user. Moreover,

once positioned for optimal rear impact protection, the headrest of Bred is obviously stationary and the passages cited by the Examiner in relation to Figure 8 do not support the Examiner's statements. The Examiner admits that Breed does not show a viewing of images provided from a correspondingly changing direction of view but points to Iwamoto for teaching same. Again, the Examiner uses the same motivation as in the rejection of claims 1, 2 and 6. The Examiner is referred to the above remarks concerning the rejection of claims 1, 2 and 6 and it is believed that those remarks are equally applicable to the Examiner's objection to claim 10. For that reason, withdrawal of the rejection of claim 10 based on Watkins and Iwamoto is requested.

Withdrawal of the 35 U.S.C. §103 rejection of claim 10 is requested.

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Regarding the rejection of claim 8, under 35 U.S.C. §103(a) as being unpatentably obvious over Reichlen (U.S. 6,396,497) in view of Stoeckl (U.S. 5,203,609), the applicant agrees with the Examiner that Reichlen shows everything claimed in claim 8 except for a sensor coupled to a moveable headrest for supporting user's head which is responsive to head movements of the user for providing a sensed signal having a magnitude indicative of differing directions-of-view corresponding to the head movements. While Reichlen provides a sensor for sensing head movements of the user, the user's head is not supported by a moveable headrest. That is the only difference between Reichlen and the invention as claimed in claim 8. The Examiner points to Stoeckl for teaching a dental chair comprising a sensor coupled to a moveable headrest for supporting a user's head for providing a sensed signal, pointing to Figure 1-2, items 5, G1-G4, column 7, lines 7-23).

The applicant agrees with the Examiner that if the Stoeckl reference is to be considered analogous art, it must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant

was concerned, in order to be relied upon as a basis for rejection of the claimed invention. Clearly, the Stoeckl reference is not in the field of the applicant's endeavor. Applicant does not believe that Stoeckl is reasonably pertinent to the particular problem with which the applicant was concerned. The Stoeckl reference has to do with a dental patient chair with a seat, backrest and a headrest which are adjustable in both the horizontal and vertical directions relative to a base part to establish a given chair position for treatment. It has nothing whatsoever to do with a reality engine for providing an image signal indicative of a sequence of images from differing directions-of-view selected according to a sensed signal or a display responsive to an image signal for providing the sequence of images for viewing by the user from the differing directions-of-view. It is not seen how a dental patient chair reference has any reasonable pertinence to the problem addressed by the present invention which has to do with the subject matter in Reichlen, i.e., a computer user interface with head motion input, regardless of whether Reichlen does or does not represent any kind of relaxed experience preferred by most users in the entertainment context. Stoeckl and Reichlen are simply addressing wholly different technologies for solving completely different problems in completely different arts which are not reasonably related.

Furthermore, the sensors of Stoeckl are not coupled to a moveable headrest responsive to head movements of the user. The Stoeckl reference does not provide a sensed signal having a magnitude indicative of different directions-of-view corresponding to head movements. There is not any reality engine shown or suggested by Stoeckl responsive to a sensed signal, for providing an image signal indicative of a sequence of images from different directions-of-view selected according to such a sensed signal. The Stoeckl reference does not show a display, responsive to such an image signal, for providing a sequence of images for viewing by a user from different directions-of-view.

Clearly the art of moving a dental patient chair with a controllable positioning arrangement to enable positioning a reference point or “mouth point” in a particular position in both vertical and horizontal directions has nothing whatsoever to do with the field of endeavor of virtual reality or imaging systems in which a changing direction-of-view of the images is coupled to a changing direction-of-view of the head of the viewer. Thus it has to be concluded that the Stoeckl reference is not within the field of the inventor’s endeavor and that the Stoeckl reference is not reasonably pertinent to the particular problem with which the inventor is involved. As explained above, problems addressed by the present invention are first, the known active and passive systems require the user to address the imaging system with an erect standing or seated posture that can be physically wearying over extended periods and second, in the context of active applications, such as entertainment, they require the user to exert a degree of activism that can be overly demanding and even disconcerting. Such requirements are the antithesis of the relaxed entertainment experience preferred by most users. It cannot be said that the art of adjustable dental patient chairs is reasonably pertinent to the particular problem of solving the above-mentioned two-fold problem. It is not believed of one of ordinary skill in the art would reasonably be motivated to go to the field of adjustable dental patient chairs to solve this two-fold problem. Therefore, from a common sense point of view, the Stoeckl reference is not reasonably pertinent analogous art and the obviousness rejection of claim 8 is inapplicable.

Regarding the differences between the prior art and the claims at issue, Reichlen (U.S. 6,396,497) teaches a reality engine (computer) with sensor attached to the user’s head responsive to sensed signal for providing an image signal indicative of a sequence of images from different directions-of-view selected according to sensed signal and a display responsive to an image signal, for providing a sequence of images for viewing by the user from different directions-of-view.

According to the Examiner it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a headrest with a sensor in the Reichlen apparatus in view of the teaching of Stoeckl to coordinate views with different directions.

The Reichlen reference is similar to Iwamoto in that it shows a seated user sitting in an erect position using a computer interface as described in detail by Reichlen, this sort of a system would qualify as an active system requiring the user to address the imaging system with an erect seated posture that can be physically wearying over extended periods. See the present specification at page 2, lines 11-14. See also lines 14-17 where Reichlen would also qualify as an active application that requires the user to exert a degree of activism that can be overly demanding and even disconcerting.

Therefore, it should be understood that Reichlen does not represent any kind of moveable headrest for providing a sensed signal having a magnitude indicative of differing directions-of-view corresponding to the head movements.

In that light, it should be understood that the present invention could be utilized in a system such as shown by Reichlen except with a headrest added so that the user has his head supported by a moveable headrest as claimed in claim 8. The transmitter 26 and sensor 28 of Reichlen would be replaced by the sensor coupled to a moveable headrest for supporting the user's head such as claimed in claim 8. The sensor would be responsive to head movements of the user, for providing a sensed signal having a magnitude indicative of differing directions-of-view corresponding to the head movements. None of this is shown or even suggested by Reichlen or Stoeckl.



According to the caselaw, it is necessary for the Examiner to show where in the prior art there is some suggestion either or expressly or by implication of the possibility of achieving the improvement claimed by the present claim 8 by combining the teachings of both Reichlen and Stoeckl.

This the Examiner has not done and it is not seen why it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the navigation method of Reichlen in the Stoeckl apparatus in order to perform the claimed subject matter. There is simply no hint or suggestion in either reference that the Reichlen invention could be combined with the adjustable dental chair.

The Examiner's motivation as recited would not have occurred to one of skill in the art without the exercise of the present inventor's inventive faculty of perceiving that a virtual reality or imaging system in which a changing direction-of-view of the images is coupled to a changing direction-of-view of the head of the viewer could be done.

Withdrawal of the 35 U.S.C. §103 rejection of claim 8 is requested.

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In regard to the 35 U.S.C. §103 rejection of claims 3-5 and 7 as being unpatentably obvious over Breed, Iwamoto as aforementioned in claims 1 and 2 in view of Zwolinski et al. (U.S. 6,055,473).

Firstly it should be pointed out that Zwolinski et al is not properly of record. The Examiner has for the first time cited this patent and has not provided any listing thereof on any PTO-892, as required by MPEP § 707.05(a) and which is needed for it to be printed on the face of any patent that may be granted. Applicant requests the Examiner make this reference officially of record so it will be printed on the face of

any patent that may be granted.

In addition to the comments made above about the rejection of claims 1 and 2 based on Breed and Iwamoto, the Zwolinski et al reference is similar to Breed except the actuator 54 is only capable of moving the headrest 16 up and down and is not capable of tilting the headrest as in Breed et al. Zwolinski et al also have a transducer 56 for sensing the position of the headrest for use in a closed-loop control of the headrest position. The Breed et al sensors 120, 121 are not used in that way but rather are used to sense the position of the driver's head. However, it is still the case that neither Breed et al nor Zwolinski et al are analogous art for the same reasons given above in connection with the obviousness rejection of claims 1-2, 6 and 10 based on Breed et al in view of Iwamoto. Even if that were not the case, however, neither Breed et al nor Zwolinski et al provide the requisite motivation to combine the automotive headrest control with the virtual reality and imaging systems in which a changing direction of view of the images is coupled to a changing direction of view of the head of the viewer, as in Iwamoto. The Examiner's *rationale* mentions the actuator in "Watkins and Breed et al" but it is believed that the Examiner meant to say --Breed et al and Zwolinski et al-- since the rejection is based on Breed et al and Zwolinski et al coupled with Iwamoto not Watkins. In any event, the *rationale* given by the Examiner "to widen the range of applications" is believed to be hindsight reconstruction since there is nothing in the automotive applications of Breed et al or Zwolinski et al that would even suggest combining the headrests that are provided for optimum rear impact protection in an automotive context for a virtual reality or imaging system with a change in direction-of-view application where the changing direction of view of the images is coupled to a change in direction of view of the head of the viewer. Such hint or suggestion would need to be found in the prior art itself in order to sustain this rejection and such has not been provided by the Examiner's *rationale* that it could be done in order to widen the range of applications. Therefore, the 35 U.S.C. §103

rejection based on the Breed, Iwamoto, and Zwolinski references is inapplicable and withdrawal of the rejection of claims 3-5 and 7 on that ground is requested.

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Regarding the rejection of claim 9 under 35 U.S.C. §103(a) as being unpatentably obvious over Reichlen in view of Breed et al and further in view of Zwolinski et al, the same may be said for Zwolinski et al as said in the previous rejection where it was pointed out that the automotive headrests of both Breed et al and Zwolinski et al are not analogous prior art to the computer user interface with head motion input of Reichlen. It would not occur to a person of ordinary skill in the art of computer user interfaces with head motion input such as disclosed by Reichlen to try to solve the problem recognized by the present applicant by looking to the automotive headrest art. The *rationale* given by the Examiner, i.e., to incorporate the headrest of Breed et al and the actuator of Zwolinski in Reichlen's apparatus "in order to adjust the seat to assure the proper interaction with other systems" is not pertinent and does not supply the requisite motivation required to lead one of ordinary skill in the art facing the problem recognized by the present applicant to solve said problem. It is similar to the rationale advanced by the Examiner in the *In re Oetiker* case which was not defended by the USPTO solicitor. The problem that the present applicant was presented with does not involve a problem involving the proper interaction with other preexisting systems such as would exist in an automotive application with a preexisting headrest attached to a preexisting seat. In that automotive context there might be a need to assure the proper interaction of the headrest with the seat but in the Reichlen situation there is not a preexisting headrest supporting the user's head. Therefore, there is no motivation to assure the proper interaction of the computer user interface with head motion input of Reichlen with a headrest because there is not headrest and there can be no such motivation to assure proper interaction between a system in which such a headrest does not exist.

The withdrawal of the 35 U.S.C. §103 rejection of claim 9 is requested.

\* \* \*

Regarding the rejection of claim 11, 14 and 15, claim 11 depends from claim 10 which claims an apparatus comprising a headrest and a support for supporting a user viewing images in a reclining posture. In addition to none of the applied references showing a headrest and a support for supporting a user viewing images in a reclining posture with a head of the user resting on the headrest mounted on or with respect to the support, none of the applied references show or suggest a moveable headrest for supporting the head of the user in executing head movements in a changing direction of the head of the user while viewing images provided from a correspondingly changing direction of view, the head and headrest moving together in the changing direction with respect to the support. Furthermore, regarding claim 11, there is no actuator shown for moving such a headrest with respect to such a support for changing the direction of the head of the user in executing head movements with respect to such a support. Regarding claims 14 and 15, although an automotive seat is typically positionable, and may even be continuously positionable, such would not have been obvious to one of ordinary skill in the art in either the automotive art or the virtual reality art when trying to solve the problem presented to the present applicant. First of all the two areas of prior art are not analogous and secondly there is no motivation to combine for the reasons given by the Examiner, i.e., to assure the proper interaction with other systems for the same reasons as given above in connection with the rejection of claim 9. There is nothing in Iwamoto that would suggest using a recliner with a headrest and there is nothing in the automotive prior art applied by the Examiner that would hint at the art of virtual reality or imaging systems in which a change in direction-of-view of the images is coupled to a changing direction-of-view of the head of the viewer.

The obviousness rejection of claims 11, 14-15 is inapplicable and withdrawal

thereof is requested.

\* \* \*

Regarding the 35 U.S.C. §103(a) rejection of claims 12 and 13 as being unpatentably obvious over Iwamoto, Breed et al. and Zwolinski et al as applied to claim 11 and further in view of Reichlen, even though the Examiner mentions the Watkins reference in the third paragraph of item number 7 on page 7, it is believed the Examiner meant to say Breed et al. Again, the automotive applications of Zwolinski and Breed et al are nonanalogous art as explained previously. But even if that were not the case, the *rationale* given by the Examiner to combine the references, i.e., that it would have been obvious to one of ordinary skill in the art to provide a reality engine of Reichlen in Iwamoto, Breed, and Zwolinski et al in order to perform “certain computer functions,” such does not come from the references themselves but it is believed to be founded on hindsight reconstruction in view of the applicant’s disclosure in solving the problem recognized by the applicant and not shown or suggested from the prior art.

Regarding claim 13, Iwamoto does not teach a sensor for sensing movements of moveable headrests because there is no headrest in Iwamoto and the devices shown in Figure 6 of Iwamoto cannot fairly be called a headrest or provide the requisite hint or suggestion to provide a headrest much less a sensor within a headrest. Withdrawal of the 35 U.S.C. §103(a) rejection of claims 12 and 13 is requested.

\* \* \*

Regarding the 35 U.S.C. §103(a) rejection of claims 16 and 17 as being unpatentably obvious over Breed et al and Iwamoto as applied to claims 1, 10 above and further in view of Helman (U.S. 5,791,735), the Helman reference is added to show rotational movements including left and right rotational movements as in claim 16 and to show a changing direction including left and right changes in direction. In the case of Helman it is also nonanalogous art since it has to do with supporting the

head of a person with weak neck muscles in a wheelchair that has nothing to do with the art of Iwamoto. One of ordinary skill in the art of virtual reality or the art of providing images from a changing direction-of-view coupled to a changing direction-of-view of the head of a viewer would not be consult the wheelchair art or the automotive art. Even if such a person were to do so, the motivation given by the Examiner to combine is simply to increase the range of applications which is not from the prior art itself but is believed to be hindsight reconstruction based on applicant's disclosure itself.

Withdrawal of the obviousness rejection of claims 16 and 17 is requested.

\* \* \*

Claim 18 is rejected under 35 U.S.C. §103 as being unpatentable over Stoeckl and Reichlen as applied to claim 8, and further in view of Helman. As pointed out above, Stoeckl is from the art of dentistry patient chairs and is nonanalogous prior art and one of ordinary skill in the art of Reichlen would not look to the art of a dental patient chair provided to establish a given chair position for treatment to solve the problem presented to the present applicant as recited in the applicant's specification. The same may be said for the Helman reference which has to do with the wheelchair art for supporting the head of a person with weak neck muscles with a headrest having side cushions that permits some freedom of left and right rotational movement while still supporting the head of the patient. A person of ordinary skill the art of Reichlen's computer user interface with head motion input would not look to the art of dental patient chairs or wheelchairs to solve the problem realized by the present applicant. Even if that were not the case, the motivation to combine provided by the Examiner, i.e., "to increase the range of applications" does not hint at or suggest to a person of ordinary skill in the Reichlen art to go to the art of dental patient chairs or to the art of wheelchairs to provide a headrest that provides rotational movements including left and right rotational movements or changing direction including left and right changes in direction as claimed in claims

16 and 17, respectively.

Withdrawal of the 35 U.S.C. § 103 rejection of claims 16 and 17 is requested.

\* \* \*

Regarding the 35 U.S.C. §103 rejection of claim 18 as being unpatentably obvious over Stoeckl and Reichlen as applied to claim 8 and further in view of Helman, the same comments made above in connection with the rejection of claim 8 apply here as well and the Examiner is referred to applicant's comments above. Regarding Helman, it would not have occurred to one of ordinary skill in the art of the Reichlen disclosure, i.e., a computer user interface with head motion input, to use the wheelchair art as a source of inspiration to solve the problem identified by the present applicant. The motivation to combine provided by the Examiner, i.e., to increase the range of applications is believed to be hindsight reconstruction not based on Stoeckl, Reichlen or Helman, but rather the applicant's own disclosure. There simply is no motivation of this kind found in any of these references.

Withdrawal of the 35 U.S.C. § 103(a) rejection of claim 18 is requested.

\* \* \*

Regarding the 35 U.S.C. § 103(a) rejection of claim 19 as being unpatentably obvious over Reichlen and Breed et al, Zwolinski as applied to claim 9 and further in view of Helman, the Examiner is referred to applicant's comments above in connection with the similar obviousness rejection of claim 9. The same comments made above apply here as well.

Regarding the Helman reference, as pointed out above, it is nonanalogous art since one of ordinary skill in the art of Reichlen's computer user interface with head motion input would not look to the wheelchair art to solve the problem identified by the present applicant. The motivation given by the Examiner to increase the range of applications is not found in any of these references but rather is only arrived at by the use of hindsight reconstruction using the applicant's own disclosure.

Withdrawal of the 35 U.S.C. § 103(a) rejection of claim 19 is requested.

\* \* \*

The objections and rejections of the Office Action of June 15, 2005, having been obviated by amendment or shown to be inapplicable, withdrawal thereof is requested and passage of claims 1-19 to issue is solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Francis J. Maguire", with a long horizontal line extending to the right.

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